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ARTICLE V.

*Extract from the work entitled عيون الانبا في طبقات الاطبا
or, Fountains of Information respecting the classes of Physicians, by Muwaffik-uddîn Abû-'labbâs Ahmad Ibn Abû Usaibiâh, by the Rev. W. Cureton; with remarks by Professor H. H. Wilson.*

INTRODUCTION.

THE following extract was originally made with the view of forming a collection of such passages relative to India as may occur in Arabic writers. The further prosecution of this design appears to be rendered unnecessary by the publication of a work by Mr. Gildemeister, of Bonn, of which the first fasciculus has appeared, entitled *Scriptorum Arabum de Rebus Indicis loci et opuscula inedita*, 8vo. Bonn, 1838. At page 94, he has spoken at some length of the names of Indian authors and books, which occur in this chapter of Ibn Abu Usaibiâh; and Dietz in his *Analecta Medica*, Lips. 1833, p. 117, has given a great part of the chapter. The whole of it is now supplied, as, independently of the information which it affords relative to the scientific intercourse between India and Bagdad, it contains some interesting anecdotes of the time of Harûn Alrashîd.

The translation has been made from a MS. in the Rich collection in the British Museum. A few collations of the names of persons, or titles of books, have been supplied from two MSS. in the Bodleian Library, Poc. 356, Hunt. 171, and from the MSS. copy of Haji Khalfa, also in the Rich collection. It does not appear necessary to make any further remarks here relative to Ibn Abu Usaibiâh, than that he lived at the commencement of the thirteenth century of our era, and died A.H. 668.

CHAP. XII.—ON THE PHYSICIANS WHO WERE FROM INDIA.

KANKAH THE INDIAN; كَنَكَةُ الْهِنْدِي

He was skilful as a philosopher amongst the ancient philosophers of India, and one of the greatest of men. He investigated the art of physic, the power of medicines, the nature of compound substances, and the properties of simple substances. He was the most learned of all men in the form of the universe, the composition of

the heavenly bodies, and the motions of the planets. Abu Ma'ashar Ja'afar bn Muhammad bn Umar Albalkhi¹, in the Kitáb ululúf كتاب الالوف says that Kankah was the first in the science of astronomy among all the philosophers of India in ancient time. Kankah is the author of the following books ;—

1. النموذاري الاعمار The Model on Lives.
2. كتاب اسرار المواليد A book on the Mysteries of Nativities.
3. كتاب القرائن الكبير وكتاب القرائن الصغير Two books on the Conjunction of the Planets, one called the greater, the other the less².
4. كتاب في الطب و هو بجري مجري كناش³ A book on Medicine which is esteemed as a Kunnásh³.
5. كتاب الوهم The Book of Imagination.
6. كتاب في احداث العالم والدور في القران A book on the Creation of the Universe, and on the Revolution in Conjunction.

¹ Abu Ma'ashar Ja'afar Albalkhi died A.H. 272. Haji Khalfa says of this work, ذكر فيه الهياكل والبنيان العظيمة التي يحدث بناوها في العالم في كل الف عام He speaks in this book, of the temples and great buildings which were constructed in the world, in each thousand years. His life is written by Ibn Khalikán.

² Haji Khalfa notices the second and third of these works; he calls the author كناش الهندي من قدماء المتبحرين Kankah the Indian, one of the ancient astronomers.

³ The word كناش³ الكناشات is thus explained in the Kámús. كناش³ الكناشات "Kunnáshat are the roots from which the branches spread themselves." The meaning of the word here appears to be a book of collections of recipes and observations, which a physician makes during the course of his practice. At least in the enumeration of the works of the different physicians, Syrians especially, almost every one is said to have composed a Kunnash, كناش³ The word is probably derived from the Syriac "to collect." In Codd. Marsh. 159, 547, it is written, قناش See Nicoll's Cat. p. 590. Solomon Negri renders it Syntagma. Gildemeister—following, as it appears, Dietz—has fallen into the error of mistaking the words بجري بجري so commonly used to express similarity or resemblance, for the title of a book; Librum de Medicina Jag'ri Magri Inscriptum, p. 95. The word كناش³ probably, being omitted in the MS. made use of.

SANJAHAL, صنجهال

He was one of the learned men of India, and of those eminent among them for their knowledge in medicine and astronomy or astrology. He was the author of a book called كتاب المواليذ الكبير 'The great Book of Nativities'.

After Sanjahal the Indian, there arose in the cities of India, several authors of books well known on the art of medicine, and on other sciences; such were باكهـر داهـر جبهـر راحـه انكـر انـدي Bākhar, Dāhar, Jabhar, Rāhah, Ankar, Andi, Sakah, Zangal, Jāri². All these being authors of various books, were philosophers and physicians of India; and to them are to be referred the rules laid down relating to the science of the stars. The Indians at present occupy themselves with the works of these men, and imitate them, handing them down from one to another. Many of them have been translated into the Arabic. I have discovered also that Rāzi, in his book called الحاوي³ and in several others, has copied from the works of many of the Indians, such for instance as the book of Sirak the Indian كتاب سيرك الهندي⁴. This book Abd-ullah bn Ali paraphrased from the Persian into the Arabic, for it had been originally translated from the Indian into the Persian. Also from the book of Sasard كتاب سسرد in which are the symptoms of diseases, the manner of treatment, and the medicines to be used for them. It is in ten chapters. Yahya bn Khālid⁵ ordered it to be paraphrased.

¹ Haji Khalfa assigns this book to Kankah, and not to صنجهال

² These names are given in different order in two MSS. of this work in the Bodleian Library. In MS. Pocock, No. 356, they occur in the following order, the alternate names being written in red ink:

باكهـر . راحـه . صكهـه . داهـر . انكـر . روكـل . جبهـر . انـدي . جاري
In Cod. Huntingdon, No. 171:

باكهـه راحـه صكهـه داهـر زنكل جهر اندي جار

³ The full title of this work is الطـب الحـاوي في الطب Muhammad bn Zacariya Alrazi died A.H. 311.

⁴ Haji Khalfa mentions this book. I quote the passage entire, because it shows that he obtained his information respecting this book, and probably all the others, from Ibn Abū Usaibiāh. كتاب سيرك الهندي نقل من الهندي الى الفارس

ثم فسر عبد الله بن علي من ان فارس الى العربي ذكره في العيون
The two MSS. in Bodleian Library above mentioned, read سيرك

⁵ Grand Vazir of Hārūn Alrashīd, put to death, together with his son Jaāfar, by order of that Khalif, A.H. 187.

A book called ¹ كتاب يدان on the symptoms of four hundred and four diseases, and the knowledge of them, but without the mode of treatment. A book called Sandhishán كتاب سندھيشان and its paraphrase كتاب صورة النجح the Image of Good Fortune. A book on the points of difference between India and Greece, with respect to heat and cold, the powers of medicine, and the division of the year². A book in which the names of drugs are explained by names used in common conversation, كتاب تفسير اسمها العقار باسماء عشرة also كتاب اسانكر الجامع A book on the mode of treatment of Pregnant Women, and a compendium on Drugs, are also referred to India. Likewise a book Fúfasal كتاب فوفسل in which are a hundred diseases and a hundred remedies. Also a book روسا الهنديه on the medical treatment of Women. Likewise a book of Sugar كتاب السكر is due to India. A book of Ray the Indian³ كتاب راي الهندي on different kinds of Vipers and their Poisons. A book of the imagination on Diseases and Infirmities, by Abú Fabal⁴ ابو فبل the Indian.

Also among the distinguished physicians of India, is

شاناق SHÁNÁK

He is the author of many methods of treatment and experiments. He was also skilled in several branches of science and philosophy; he was very eminent in the science of astronomy, and formerly much esteemed for his eloquence by the princes of India. The following is a specimen of his eloquence, taken from one of his works called متنخل الجواهر "Oh! Prince, be on thy guard against

¹ MS. Poc. 356. Reads كتاب يدان

² Haji Khalfa. كتاب سندھيشان و تفسيره كتاب صورة النجح من كتب الهنود المقدماء في الطب

³ Mentioned by Haji Khalfa, thus كتاب اختلان الهند والروم في الحار والبارد وقوي الادوية و تفصيل السنة من كتب الهنود

⁴ This is called by Haji Khalfa كتاب نوفشل and in the next, for روسا الهنديه he reads روسي الهنديه MS. Poc. كتاب نوفشل Haji Khalfa also notices كتاب السكر روسي الهندي

⁵ This may perhaps be translated, "A book on the opinion of the Indians, &c."

⁶ Haji Khalfa reads ابو قبيل

the lapses of time, and the domination of days, and the sadness of the prevalence of age. Know that there is a recompense for all actions; be on thy guard, then, against the events of time and days. They have their excuses, be on the watch against them. The decrees of fate are concealed in futurity, be therefore prepared for them. Time changes, be cautious of its sway. Trouble will happen, fear then its violence. Honour soon passes by, put not thy trust on its prosperity. And know, that he who does not heal himself of the wounds of days in the days of his life, how far will he be from health, in that mansion where no remedy is found! He who abases and subdues his senses, in whatever good thing is presented to his soul, shows his superiority and manifests his excellence. He who cannot restrain his soul, which is but one, cannot restrain his senses, which are five; if, then, he cannot subdue his senses, which are so few and so mean, it will be a hard thing for him to hold in subjection his armies, which are so many and so violent. Therefore, his people in the most distant cities and at the extremity of his dominions, will be far off from any restraint." Shánák is the author of the following books:—A Treatise on Poisons in five books¹, which Mankah the Indian paraphrased from the Indian into the Persian language. And the person appointed to transcribe it into the Persian character, was a man known by the name of Abu Hátim. Albalkhi paraphrased it for Yahya bn Khálid bn Barmak. Afterwards, it was transcribed for Almamún, by the hand of Alabbás bn Sáid Aljawhari, who was attached to him, and he was appointed to read it to Almamún. A book on the Veterinary Art². A book on Astronomy. A book called متنخل الجواهر which he composed for one of the kings of his own time. The name of this king was Ibn Kamúnas the Indian ابن قمانص الهندي

كتاب السموم لشاناق الهندي خمس مقالات فسرهُ¹ حاجي خالفا، thus من الهندي إلى الفارسي منكه الهندي وكان المتولي لنقله بالفارسية رجل يعرف بابي حاتم البخاري فسرهُ لبحيي بن خالد بن برمك ثم نقل للمامون علي يد العباس بن احمد بن الجوهري مولاه وكان المتولي قراته علي المامون

² In a treatise on the Veterinary Art, in the Bodleian, in Pocock 360, called البيطرة and in MS. Poc. 129, بيطارنامة an extract is given from an Indian book on this subject, by an author named Jannah جنه الهندي

JAWDAR جودر

Jawdar was eminent among the philosophers and learned men of India, and of much distinction in the age in which he lived. He followed the study of medicine, and wrote several works on the philosophical sciences. He is the author of a book on Nativities¹ كتاب المواليذ which has been translated into the Arabic.

MANKAH THE INDIAN منكه الهندي

He was learned in the art of medicine, skilful in his application of remedies, and gentle in his method of treatment. He was one of the most distinguished philosophers in the sciences of India, and was well acquainted both with the language of India and of Persia. It was he who translated the book of Shánák the Indian, treating of Poisons, from the Indian to the Persian tongue. He lived in the days of Harún Alrashíd, and came during his reign, from India to Irák, and attached himself to him and attended him. I have found in some book, that Mankah the Indian was attached to Ishák bn Sulaimán bn Ali Alhashimi, and was employed in translating from the Indian language into the Persian and the Arabic. The following account I have extracted from a book entitled "Histories of the Khalifs and of the Barmacides²." "Alrashíd was afflicted with a severe disease, and although attended by his physicians, could not recover from his illness. Then Abú Amrú AlaAjami said to him: 'There is a physician in India named Mankah, who is one of their devotees and philosophers; if the Commander of the Faithful would send to him, God would perhaps grant him the restoration of his health through his means.' Alrashíd therefore sent a person to fetch him, and at the same time to carry to him such a present as would induce him to undertake the journey. Accordingly he came, and attended Alrashíd, who under his treatment recovered from his disease; and, in consequence, bestowed upon him considerable wealth, and granted him a pension.

"One day he beheld a quack spreading out his cloak and throwing into it a variety of drugs, and then begin to describe a medicine which he had already prepared, in the following terms: 'This medicine will cure a continued fever, or an intermittent fever, or a quartan. It is good for a pain in the back, or a pain in the loins, for the

¹ Not in Haji Khalfa.

² There is no book with the title اخبار الخلفاء البرامكة mentioned in the copy of Haji Khalfa in the British Museum.

disease called Alkhám (الْحَامِر) for the piles, for wind, for a pain in the joints, or in the eyes, for the belly-ach, for the head-ach, for the megrim, (الشَّقِيقَةُ)¹ for the strangury, for paralysis, for palsy.' Nor did he omit any one disease to which the body is liable; declaring also that this medicine was a specific for them all. Mankah said to his interpreter, 'What is this fellow talking about?' The interpreter explained to him all that he said. Mankah smiled, and observed: 'Surely the king of the Arabs, in every point of view, must be foolish; for if the matter be as this fellow states, why did he bring me from my country and separate me from my family, taking so much trouble on my account, when he might have found this fellow before his eyes and under his nose? But if the matter be not as this person says, why does he not put him to death, for the law allows that such a fellow's blood should be shed, and that of all who resemble him. For, were they to be put to death, not many persons would be lost; but if this continue, and such folly become the cause of one death every day, and it is likely that it may be the cause of two, three, or four, this would be a loss to religion, and a source of distress to the nation.'"

SALIH SON OF BALAH THE INDIAN صالح بن بهله الهندي

He was distinguished amongst the learned men of India, well skilled in their methods of medical treatment, and had power and influence in the promotion of science. He came to Irāk in the days of Harūn Alrashīd. Abū'lhasan Yūsūf bn Ibrāhīm², the astrologer, known by the name of Ibn Uldāyah, has related that Ahmad bn Rashīd the secretary, the freed-man of Salām Ulabrash, said that his master told him, that one day the table was laid before Alrashīd, and Jabrīl³ bn Bakht-Yashuā was absent; "then," he continues, in the words of Ahmad, "Abu Salamah (meaning his master) proceeded: 'Then the Commander of the Faithful commanded me to seek for Jabrīl, in order that he may commence his repast according to his usual practice. I searched therefore in every apartment, with-

¹ Ibn Sina defines الشَّقِيقَةُ thus: هي وجع في احد جانبي الراس
 "It is a pain on one side of the head."—GALENUS *ἡμυχράνιον*.

² Jabrīl was a physician in high repute and favour at the court of Bagdad, during the reigns of Harun Alrashīd and his two sons, Amin and Mamūn. His life, translated into Latin, from the Arabic of Ibn Abū Usaibiāh, by Solomon Negri, has been published by Dr. Friend, at the end of his second volume of the *History of Physick from the time of Galen to the beginning of the Sixteenth Century*, 4to. London, 1725.

³ He wrote a history of physicians, entitled انجبال الاطبا Vide Haji Khalifa.

out omitting one, either of the princes or of any other in the palace where Jabrîl used to visit, but could find no traces of him. I therefore informed the Commander of the Faithful of this circumstance, who immediately began to curse and abuse him. At this moment, Jabrîl entered; and finding Alrashîd abusing and swearing at him in this manner, 'If,' said he, 'the Commander of the Faithful were to occupy himself with weeping over his cousin Ibrâhîm bn Sâlih, and to leave off abusing me in this manner, it would be more becoming.' He then inquired after Ibrahim, and was told by Jabrîl, that he had left him in a dying state; and that by the time of the last prayer for the night, he would have expired. Alrashîd was violently affected, and began to weep; and ordered the table to be immediately removed. So much was he affected by this circumstance, that all who were present could not help pitying him. Then said Ja'afar bn Yahya, 'O Commander of the Faithful, the treatment of Jabrîl is after the manner of the Greeks; but Sâlih son of Balah the Indian would apply his remedies according to the science of the Indians, in the same way as Jabrîl follows the method of the Greeks. Should, therefore, the Commander of the Faithful think proper that he be fetched, and sent to Ibrâhîm bn Sâlih, we shall know from him what is his opinion, as we know what that of Jabrîl is.' Alrashîd then bid Ja'afar fetch him, and after having conducted him to the patient, to return. Ja'afar did so. Sâlih went therefore and visited Ibrâhîm, and having felt his pulse, returned to Ja'afar, who asked his opinion respecting the patient. Sâlih replied, 'I will give no account of him to any one but only the Commander of the Faithful himself.' Ja'afar urged him much to tell him the whole matter, but he persisted in refusing. Ja'afar, therefore, went to Alrashîd, and informed him that Sâlih had been to visit the patient, but refused to give him any account of what he had seen. He then ordered that Sâlih should be brought into his presence; who, having entered, said, 'O Commander of the Faithful, thou art at the head of the religion, and thou art supreme in all decrees and judgments; and whatsoever sentence thou passest, no judge is able to abrogate it. I testify then, O Commander of the Faithful, before thee, and call every one here present to witness against me, that if Ibrâhîm bn Sâlih die this night, or of this illness, that all the slaves of Sâlih son of Balah shall be free before God; that every beast which he possesses shall be dedicated to holy purposes; that all his money shall be for alms to the faithful; and that he will divorce every one of his wives, even three young women.' Alrashîd replied, 'Sâlih, rash man, thou hast sworn upon a thing

that is still in the darkness of futurity.' Sâlih answered, 'By no means, O Commander of the Faithful; the darkness of futurity is that of which none has any knowledge; nor is there any indication to point it out to him. I have not declared that which I have just spoken, without clear knowledge and evident indication.' " Ahmad bn Rashîd proceeds: "Abu Salamah continued his narrative to me: 'Then the grief of Alrashîd left him; and he ate and commanded drink to be brought, and he drank. And when the hour of the last prayer for the night arrived, there came a letter from the Sâhib ul-barîd in the City of Peace, to announce to Alrashîd the death of Ibrahim bn Sâlih. Alrashîd began immediately to blame Ja'far bn Yahya, for directing him to Sâlih, and to curse India and its medicine, crying, 'Alas! the disgrace in the sight of God, that I should have been drinking Nabîdh, while my cousin was in the agony of death.' Then he called for a glass of Nabîdh, and having mixed it with salt and water, began to drink, and then to vomit, until he had discharged the whole contents of his stomach.

"Early next morning he went to the house of Ibrahim, and his attendants prepared for him a room, that he might sit by Ibrahim. There were placed two sofas, one on the right hand and the other on the left, with their seats, and pillows, and cushions, and between the two sofas small cushions. Then Alrashîd stood leaning upon his sword, and said, 'It is not becoming in so great a domestic calamity as this, to sit otherwise than on the floor; take away these sofas and cushions.' The chamberlains having done so, Alrashîd sat down upon the floor, and this became a custom among the Abbassides from that day, although it had not been so previously. Then Sâlih son of Balah came, and stood in the presence of Alrashîd, but no one spoke a word to him till the scent of the incense was perceived: then immediately Sâlih began to cry, 'Allah! Allah! O Commander of the Faithful, that thou shouldest condemn me to divorce my wife, and separate her from me who am her true husband, and that another should marry her, to whom it is not lawful! Allah! Allah! that thou shouldest rob me of my happiness, when I am guilty of no crime! Allah! Allah! that thou shouldest bury thy cousin alive; for I swear by Allah, O Commander of the Faithful, that he is not dead. Suffer me then to go in to him and see him.' And when he had cried much in this way, he permitted him to go alone to Ibrahim.

Ahmad proceeds, "Abu Salamah thus continued his story to me. Then we immediately heard a sound as of one striking the body with the palm of the hand: then the sound ceased, and forthwith we heard a shout, 'Allah Akbar! Allah Akbar!' then Sâlih came out to us

continuing to cry 'Allah Akbar!' and addressing himself to Alrashíd said, 'Rise, O Commander of the Faithful, and I will shew you a wonderful thing.' Alrashíd and I, and Masrúr the elder, and Abu Salim, went in with him. Then Sálíh took out a needle that he had with him and thrust it in between the nail and the flesh of the thumb of the left hand of Ibráhím bn Sálíh, who immediately plucked away his hand and drew it to his body. Then Sálíh said, 'O Commander of the Faithful, is a dead man sensible of pain?' Alrashíd answered, 'No.' Sálíh said, 'If thou art desirous that he should speak to the Commander of the Faithful forthwith, I will bring it to pass.' Alrashíd having answered, 'I am desirous that thou effect this.' He replied, 'O Commander of the Faithful, I fear that if I were to apply my remedies, and he were to recover while he is in these burial clothes, and the scent of the Hanút¹ upon him, that his heart would break, and that he would die indeed, and I should no longer have it my power to recover him. But if the Commander of the Faithful will order these burial clothes to be taken off him, and that he be taken and washed till the scent of the Hanút be removed from him, and afterwards that he be clothed in the same dress that he used to wear in the time of his health and while his illness was upon him, and then be perfumed with the same scent as formerly, and afterwards be laid upon one of the sofas, upon which he used to sit and sleep, I will apply then my remedies in the presence of the Commander of the Faithful, and he shall forthwith speak with him.'

"Ahmad," continues Abú Salamah, "told me, 'Alrashíd commissioned me to do what Sálíh had directed, and I did so accordingly. Then Alrashíd and I, and Masrúr and Sálíh, went into the chamber where Ibráhím was, and Sálíh called for some Kundus² (sneezewort), and an instrument to blow it with, from the servants, and blew some of the Kundus up his nose: having continued about the sixth part of an hour, his body began to be moved; then he sneezed, and sat up

الحنوط كل طيب يخلط للميت ۱ Hanút is the name of every kind of scent that is mixed for dead bodies.—KAMUS.

الْكُنْدُسُ عُرُوقُ نَبَاتٍ دَاخِلُهُ أَصْفَرٌ وَخَارِجُهُ أَسْوَدٌ مُقْتَنِيٌّ مُسَهِّلٌ جَلَاءٌ
لِلْبَهْثِ وَإِذَا سُخِّفَ وَنُفِخَ فِي الْأَنْفِ عَطَسَ وَانْأَارَ الْبَصَرَ الْكَلِيلَ وَأَزَالَ
الْعَشَا

* Kundus is the root of a plant which is yellow inside and black out. It operates as an emetic and a purging medicine, and clears away the ringworm. When it is reduced to powder and blown up the nose it causes sneezing and enlightens the weary eyes, and stops blindness.—KAMUS.

before Alrashíd, and kissed his hand. Upon Alrashíd inquiring of him how he was, and he answered that he had been sleeping in a manner such as he never remembered to have done before, very agreeably, except that he saw in his sleep a dog rushing out upon him, and that while he was endeavouring to defend himself with his hand, the dog bit the thumb of his left hand, and then he awoke, but still felt the pain, at the same time showing the thumb into which Sálíh had thrust the needle. Ibráhím lived long after this circumstance, and married the princess Alabbasah, daughter of Almahadi, and obtained the government of Egypt and Palestine, and died in Egypt."

REMARKS ON THE NAMES WHICH OCCUR IN THE PRECEDING
NOTICES, BY PROFESSOR H. H. WILSON.

A variety of causes renders the verification of Indian names which are found in Arabic or Persian works, always difficult, and not unfrequently impracticable. Mohammedan authors are as indifferent as those of other nations, ancient or modern, to an accurate and consistent representation of foreign appellations, and give the same word in different forms, not one of which is a close approximation to its genuine enunciation. Even if the original author should have taken pains to be exact, they are frustrated by the ignorance and carelessness of his transcribers. No assurance can be felt that any given manuscript faithfully repeats a strange denomination as it was at first written, and critical emendation is necessarily of little avail for the right reading of a proper name, to the understanding of which the context cannot contribute. Even admitting, however, something like care in author and amanuensis, there is an inherent difficulty in the difference of alphabets and particularly in the absence of written vowels in Arabic and Persian writing, which must always occasion considerable perplexity, and render the determination of an Indian word in Nuskh, or Nastalik, matter of very dissident conjecture.

These considerations affect most of the names which are given in the preceding extract from the *Uyun al Amba*, although their appearance fully confirms the statement of the text that they designate Indian astronomers and physicians. There can be no doubt of their Hindu origin, although we cannot, in all instances, identify them or determine to whom they belong. The latter, indeed, is a different question from the ascertainment of the name, and even if we decipher the latter, it does not follow that we know anything of the person.

This arises in some degree from our own ignorance, from our imperfect acquaintance with the medical and scientific literature of the Hindus; but it is also very likely that, in the course of ten centuries, works and the reputations based on them have perished, and it is also probable that, in some cases at least, the individuals may have had a local celebrity only, and an Indian doctor in great practice and high repute at Bagdad may never have been heard of at Kasi or Pataliputra. That we cannot therefore particularize all the individuals of the foregoing list, is no imputation to its discredit, and its general authenticity might be admitted even if we could not verify one of the persons or the writings that it refers to. This is, however, by no means the case, and it affords specifications which can readily be authenticated and which are valuable contributions to the history of Hindu science.

The first name of the series, Kankah, might be thought to be intended for Ganga, as the letters k and g are seldom discriminated in manuscripts. Ganga alone, however, is not an Indian name, although it is of common use in combination, as Ganga-dhar. There is indeed, an astronomer of that name, of some note, who is one of the scholiasts on the *Lilāvati* of Bhāskara; but, from an astronomical computation in his work, Mr. Colebrooke infers its being written as late as the beginning of the fifteenth century¹. This being subsequent to Bhāskara, is of itself reason to infer that he could not have been known to the author of the *Uyun al Amba*.

The name of Kankah the Indian is, however, very celebrated in the history of Arabian astronomy; he is said, by Ben al Adam, a writer of the eighth century, to have visited the court of Al Mansur, A. D. 773, bringing with him Indian astronomical writings, which were translated, by command of the Khalif, by Muhammed bin Ibrahim Alfazárí. He entitled his work the *Greater Sind-hind*, which was the chief text-book of Mohammedan astronomy for some time before the Arabs had become acquainted with the writings of the Greeks, and which, in its denomination, is unequivocally Hindu. It has been conjectured by Mr. Colebrooke², that the Arabic term is intended for the Sanskrit word Siddhānta, intending the Brahma-siddhanta, in which was described the only one of the three astronomical systems of the Hindus, known by more than name to the Arabs. This is not unlikely; but another source may be suggested for the appellation, and it is not impossible that in the *Great Sind-hind* we have an attempt—modified by peculiarities of pronunciation, and possibly by the translator's

¹ A. D. 1420. Colebrooke on the Arithmetic and Algebra of the Hindus. Introd. xxv.

² *Ibid.* p. Lxv.

purpose of indicating the Indian origin of his work—to represent the *Vrihat Sanhitá*, the ‘great compilation’ of Varáhamihira, an astronomical work of the end of the fifth century, and of merited reputation.

However this may be, it seems likely that Kankah, notwithstanding the writings attributed to him, is not their author, and has only the merit of making them known to the Arabs; he would not, therefore, find a place amongst the astronomical authorities known in India. This is one reason why we cannot verify his name; another is, the possibility of an error in its orthoepy. It is written by D’Herbelot, from various authorities, Kankah, Kankar, and Kangha; by Reiske and Schultens, Kangah; and by Kasiri, from the *Tarikh ul Hukama*, Katka. Now, this last reading suggests the possibility of some mistake having been committed as to the purport of the appellation, and that although applied to the man, it was in truth applicable not to him, but to his science. Algebra, which the Arabs at this same period derived from the Hindus, or at least an important branch of it, first taught by Aryabhatta, is denominated *Kuttaka*, and in this term we have a closer approach to Katka than in Ganga, or, as Mr. Colebrooke indicates, Garga, to the Kankah of the Arabic writers.

The name, however, is of comparatively little importance; the Hindu astronomer, however called, first made the Arabs acquainted with the works of his countrymen, and especially of Varáhamihira, as, besides the *Vrihat-Sanhitá*, which is the probable origin of the *Sind-hind*, we may suspect that his other astronomical and astrological writings, his treatise called *Karana* on the motion of the planets, and his *Vrihat*, and *Laghu Játaka*, or ‘great and less books on the mysteries of nativities,’ seem to be intended by the works on similar subjects attributed to Kankah.

Sanjahal is a name of an Indian aspect, though no Sanskrit original readily offers. His great book of *Nativities* suggests the *Vrihat Játaka*, but we can scarcely imagine that his name is a corruption of Varáhamihira.

Dáhar and Jabhar are undoubted corruptions, and the former is, perhaps, the mutilation of Sridhara, an astronomical writer of antiquity. In Bákhra it can scarcely be questioned that we have the Hindu name Bhaskar, or Bháskara, the celebrated author of the *Siddhánta Siromani*. He flourished in the middle of the twelfth century (A.D. 1150), and could not, therefore, have been at the court of Al Mansur, but he is not so described. He is placed amongst the successors of Sanjahal, and as one of those whose works were

current in India when the author of the *Uyun ul Amba* wrote, rather more than a century afterwards.

The following names, Ankar, Andi, Ráhab, Sakab, Zangal, Jári, are neither Arabic nor Persian, and are no doubt Indian, but they must have been strangely distorted, and are beyond my conjecture.

This is not the case with the next appellation, Sirak, which, with the help of various readings, may be easily traced to the Indian Charak. Dr. Royle, in his *Essay on the Antiquity of Indian Medical Science*, has cited passages from the Latin translations of Avicenna, Rhazes, and Serapion, in which the name occurs Sarak, Scarak, and Xarek; and there can be no doubt that Charak, Charaka, or the name of the oldest Sanskrit physician, and also of his book, is intended. It was first translated from Indian into Persian, and from Persian into Arabic.

Of another work there is equally little difficulty in assigning the origin. The *Kitab Sasard*, or, as it may be better read, *Sasrad*, translated into Arabic by order of the Vazir of Harún, Yahya Ibn Khalid, cannot be any other than the celebrated Indian work, the *Susrut*. It is not said that it was translated first into Persian, but this is most likely to have been the case. The Arabic writer says the work contained ten chapters; the actual *Susruta* is divided into but six books, but the usual classification, and that adopted by the *Susruta*, of medical topics, is eight; to which, if the subjects of *materia medica*, the *Dravyabhidhánas*, and the *Kalpa*, or pharmacy, be added, we shall have ten.

Of the book which is called in the Arabic text *Yedan*, there can be equally little doubt. It is said to describe the symptoms of diseases without the mode of treatment. Now this is precisely the object of one division of Indian medicine, on which alone not only distinct chapters but separate treatises are written. The term by which this branch of the art is known is *Nidán*, and the same word no doubt was used by the earliest Arabic writers, though corrupted to *Yedan*, or *Bidán*, either by later compilers or copyists.

No such work as one treating of the differences of medical doctrines between Greece and India, is known to the Hindus, and it was probably written by some of the Indian savants at Bagdad. The name *Sandhishán* has a Sanskrit aspect, although it is probably corrupt.

The succeeding series of names offers nothing which I am able to identify, but the names Asankar, Fufasal, Rúsa, Rai, Abul-fabal, are evident corruptions of appellations not Arabic. The book on Sugar, *Kitáb-as-Sakar*, may be Sanskrit; the name of sugar, over the greater

part of Asia and Europe being derived from the name given to it in its parent soil, Sharkara. Shánák is probably intended for Chánakya, although known to the Hindus as a moral and political writer only. The citation from the *Mutanahhal al Jouhar* shews that he bore that character also amongst the Arabs, although they have made him an astronomer and physician also. The subject of poisons and antidotes is a branch of Hindu medicine, and separate treatises on it exist. There never could have been such an Indian king, as "Ibn" Kumánas, although the latter part of the name may have had a Sanskrit original.

JOUDAR is very probably an Indian name; such as Yava or Yodhara, or perhaps Godhara, but no such astronomical writer is known. So also of Mankah. Celebrated as he is amongst the Mohammedans, we cannot find any trace of him in Sanskrit literature, although the name is no doubt the common Hindu name Mánikya or Manick. The circumstances of his proficiency in Persian and Arabic, and his being employed much as a translator of Sanskrit books into those languages, intimate a protracted residence in Western Asia, and a celebrity in consequence in that part of the East rather than in his own country.

We may suspect the same of the Indian Salih Ibn Balah, and at any rate his name has become so transformed that it looks much more like Arabic than Sanskrit.

The identifications that we are thus enabled to make are, however, sufficient to show that the Astronomy and Medicine of the Hindus were cultivated anteriorly to those of the Greeks, by the Arabs of the eighth century; and that the principal authorities of both sciences were the same then as they are at present. The astronomical data are least conclusive. In medicine, the evidence is more positive; and it is clear that the Charaka, the Susruta, the treatises called Nidán on diagnosis, and others on poisons, diseases of women, and therapeutics, all familiar to Hindu science, were translated and studied by the Arabs in the days of Harun and Mansur, either from the originals, or translations made at a still earlier period into the language of Persia. It cannot be doubted also that the works of Varáhamihira were, at the same period, introduced to the knowledge of the Arabs, and laid the foundation of their subsequent proficiency to a greater extent even than the writings of Ptolemy.